Fig. 1

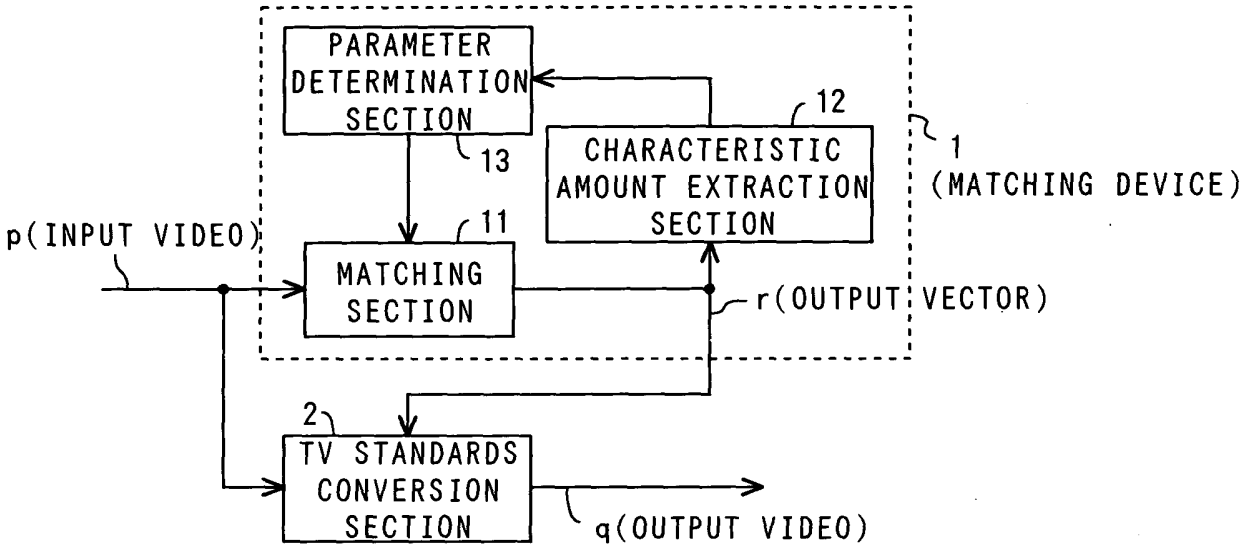

PARAMETER DETERMINATION SECTION
13
12
CHARACTERISTIC AMOUNT EXTRACTION SECTION
1
(MATCHING DEVICE)
p(INPUT VIDEO)
11
MATCHING SECTION
r(OUTPUT VECTOR)
2
TV STANDARDS CONVERSION SECTION
q(OUTPUT VIDEO)

Fig. 2

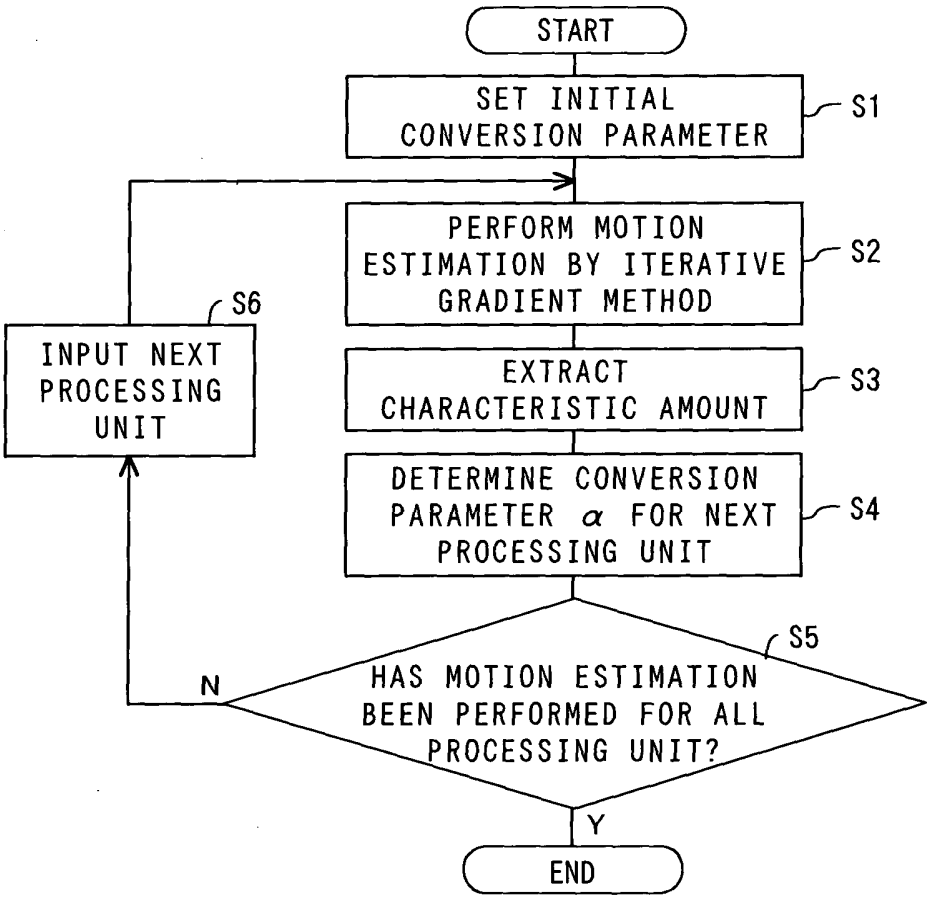

START
SET INITIAL CONVERSION PARAMETER
S1
PERFORM MOTION ESTIMATION BY ITERATIVE GRADIENT METHOD
S2
EXTRACT CHARACTERISTIC AMOUNT
S3
DETERMINE CONVERSION PARAMETER α FOR NEXT PROCESSING UNIT
S4
HAS MOTION ESTIMATION BEEN PERFORMED FOR ALL PROCESSING UNIT?
S5
N
Y
INPUT NEXT PROCESSING UNIT
S6
END

Fig. 3

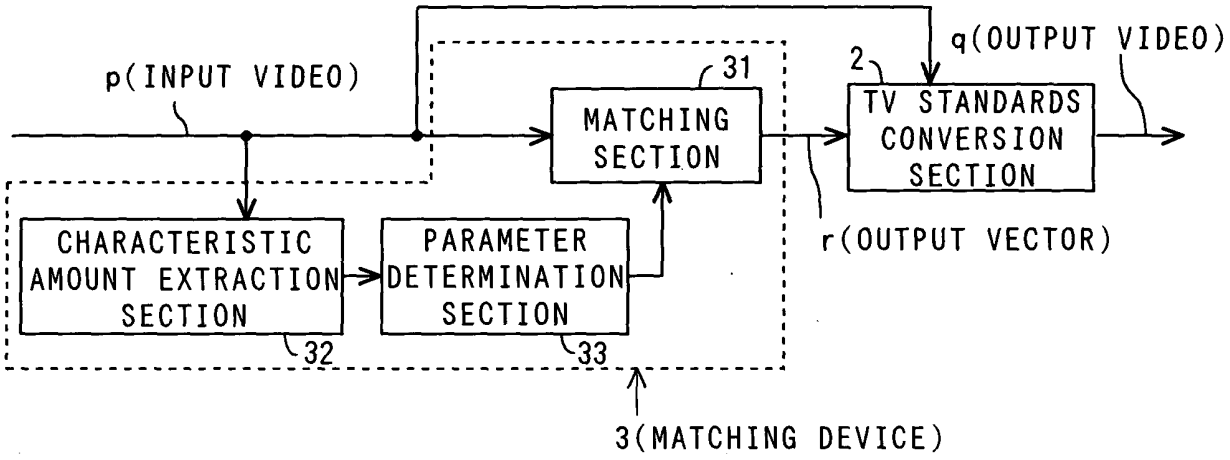

p(INPUT VIDEO)
31
MATCHING SECTION
2
TV STANDARDS CONVERSION SECTION
q(OUTPUT VIDEO)
r(OUTPUT VECTOR)
CHARACTERISTIC AMOUNT EXTRACTION SECTION
32
PARAMETER DETERMINATION SECTION
33
3(MATCHING DEVICE)

Fig. 4

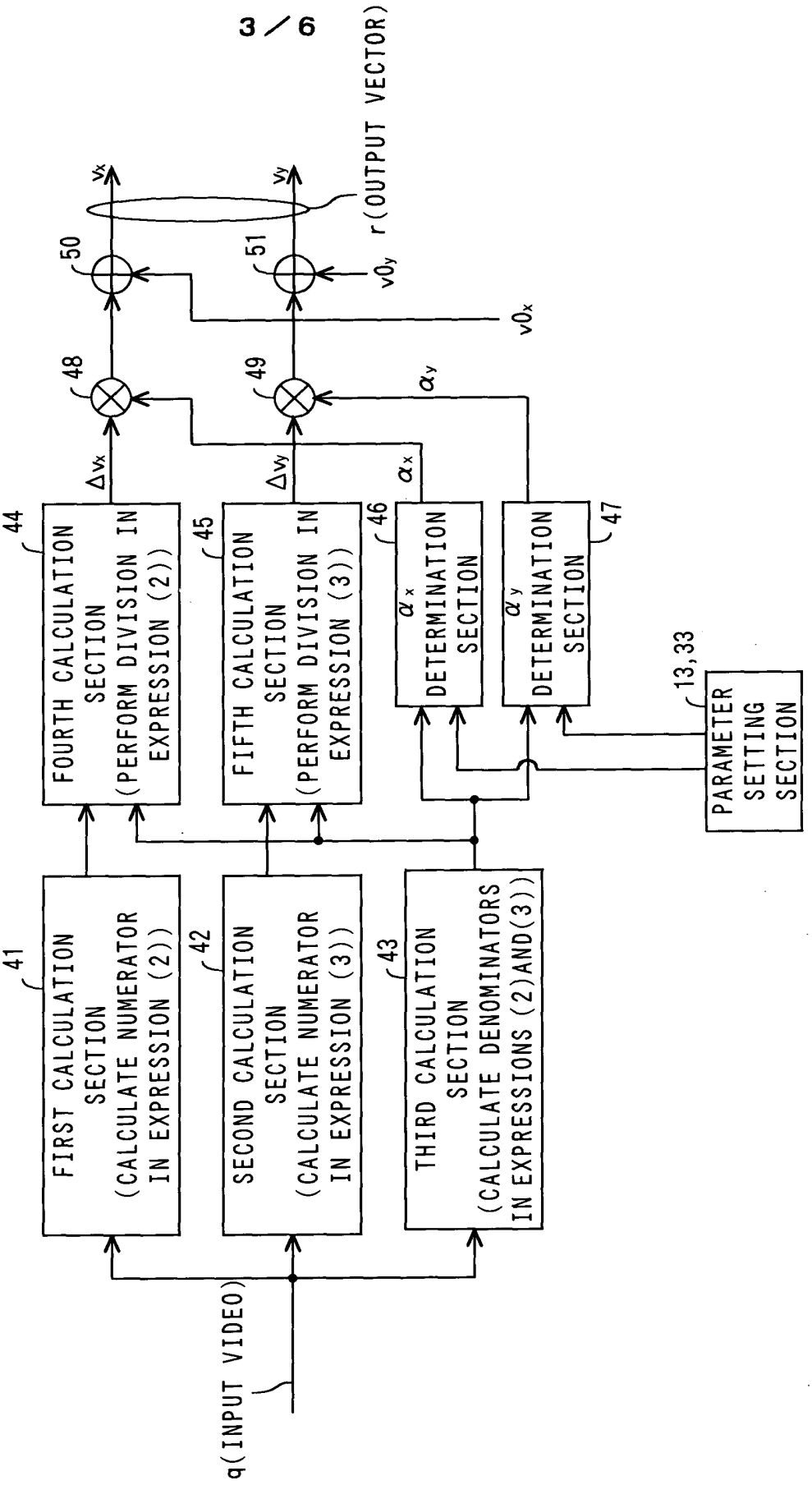

q(INPUT VIDEO)
41
FIRST CALCULATION SECTION (CALCULATE NUMERATOR IN EXPRESSION (2))
42
SECOND CALCULATION SECTION (CALCULATE NUMERATOR IN EXPRESSION (3))
43
THIRD CALCULATION SECTION (CALCULATE DENOMINATORS IN EXPRESSIONS (2)AND(3))
44
FOURTH CALCULATION SECTION (PERFORM DIVISION IN EXPRESSION (2))
45
FIFTH CALCULATION SECTION (PERFORM DIVISION IN EXPRESSION (3))
46
α_x DETERMINATION SECTION
47
α_y DETERMINATION SECTION
13,33
PARAMETER SETTING SECTION
Δv_x
Δv_y
α_x
α_y
48
49
50
51
$v0_x$
$v0_y$
v_x
v_y
r(OUTPUT VECTOR)

Fig. 5 PRIOR ART

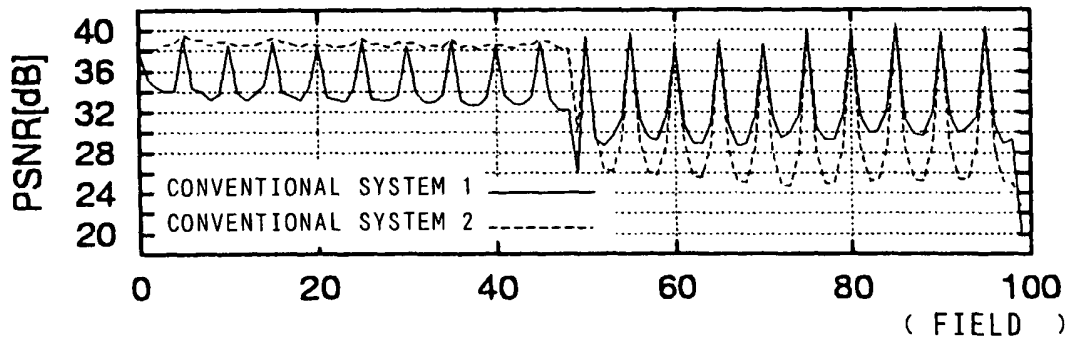


Fig. 6

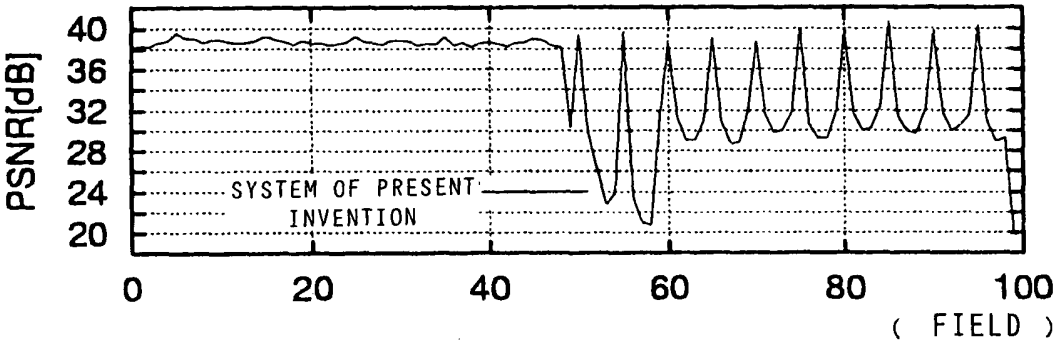


Fig. 7

SCENE	Interview	Carousel	AVERAGE
CONVENTIONAL SYSTEM 1 (FIXED)	34.4	32.0	33.2
CONVENTIONAL SYSTEM 2 (FIXED)	38.5	29.4	33.9
SYSTEM OF PRESENT INVENTION (ADAPTIVE)	38.5	31.2	34.8

Fig. 8

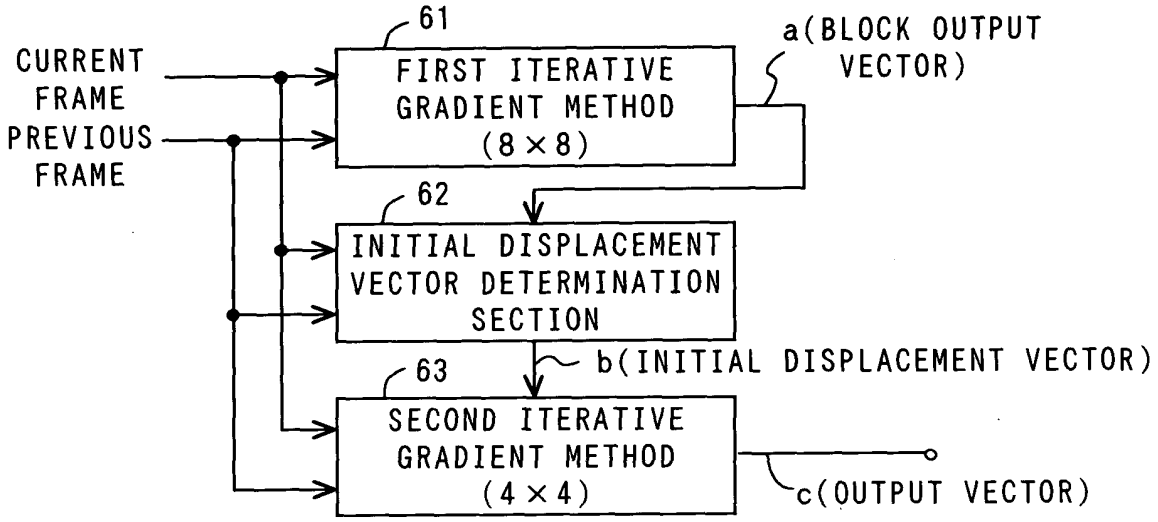


Fig. 9

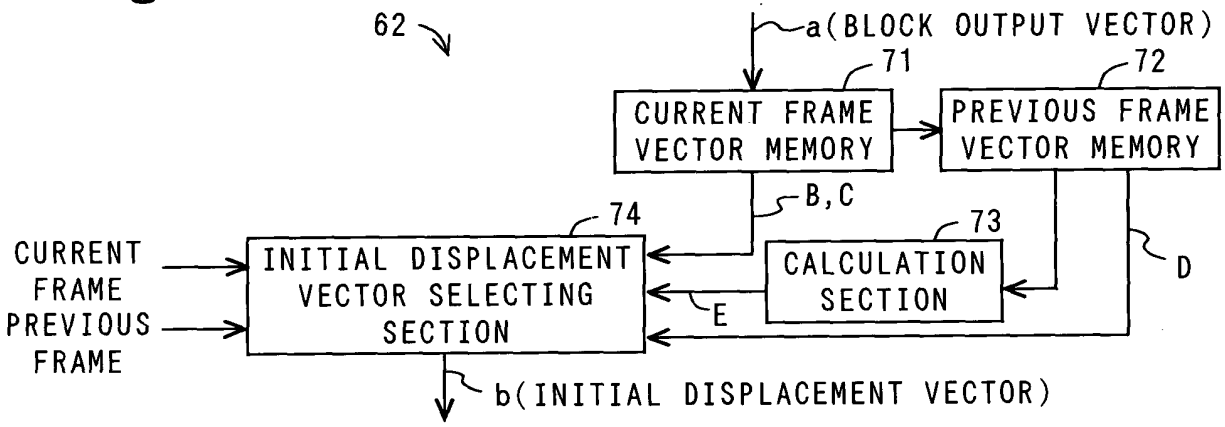


Fig. 10A

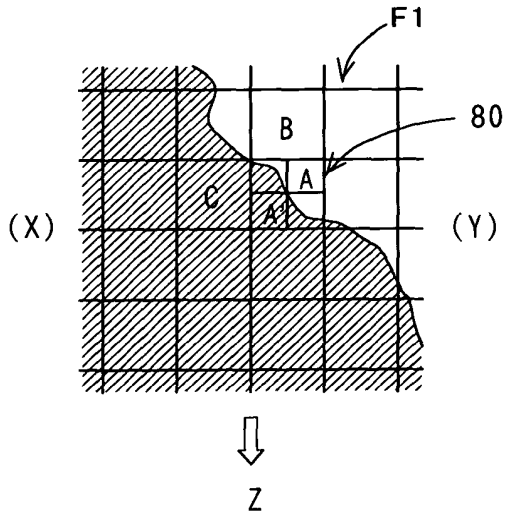


Fig. 10B

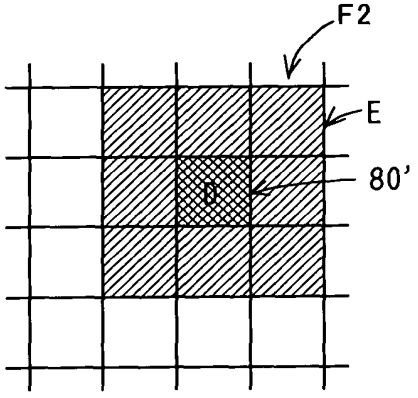
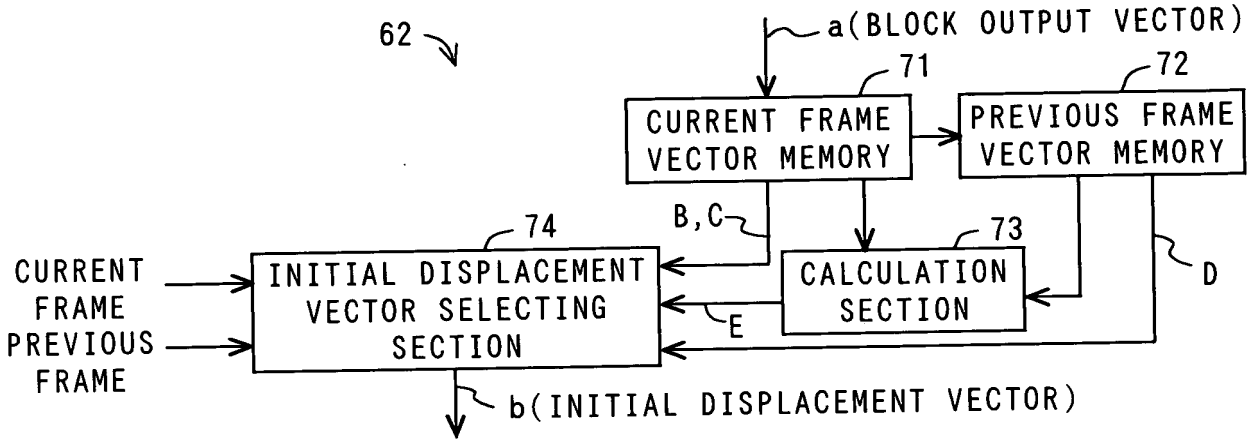


Fig. 11


62
a(BLOCK OUTPUT VECTOR)
71
72
CURRENT FRAME VECTOR MEMORY
PREVIOUS FRAME VECTOR MEMORY
B,C
74
73
CURRENT FRAME
PREVIOUS FRAME
INITIAL DISPLACEMENT VECTOR SELECTING SECTION
CALCULATION SECTION
D
E
b(INITIAL DISPLACEMENT VECTOR)